DOCUMENT RESUME

ED 396 243 CS 012 483

AUTHOR Fasko, Sharla Nichols
TITLE A Peer Tutoring Intervention for Sight-Word Recognition.
PUB DATE Mar 96
NOTE 15p.; Paper presented at the National Association of School Psychologists Annual Convention (Atlanta, GA, March 12-16, 1996).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Instructional Effectiveness; *Peer Teaching; Primary Education; Reading Improvement; Reading Rate; Reading Research; *Sight Vocabulary; *Tutoring; *Word Recognition
IDENTIFIERS *Reading Fluency

ABSTRACT

A study assessed the effectiveness of a peer tutoring intervention for sight-word acquisition, and determined whether any progress was matched by improvement in reading fluency. Four primary students were selected based upon teacher referral for poor reading fluency. Flashcards were used to determine accuracy of recognition of vocabulary words listed in each students' current and previous reading books. Number of words correctly identified were recorded for each child. In addition, reading rate in the form of correct words and errors per minute was also assessed. Reading passages for evaluating rate were chosen randomly from each student's current reading book. A single-case A-B design was used. Both sight word recognition and reading fluency were assessed 1-2 times weekly for each student. After baseline data were collected, the tutoring phase began. Results indicated that three of the four students showed improvement in sight-word acquisition during the intervention phase, and all four showed definite improvement in fluency. (Contains 12 references and 16 unnumbered charts of data.) (Author/RS)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 396 243

A Peer Tutoring Intervention for Sight-Word Recognition

Sharla Nichols Fasko

Rowan County (KY) Board of Education

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

S Fasko

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Paper presented at the National Association of School Psychologists Annual Convention, Atlanta, GA, March, 1996.

CS012483

BEST COPY AVAILABLE

Abstract

The purpose of the study was to assess the effectiveness of a peer tutoring intervention for sight-word acquisition, and determine whether any progress was matched by improvement in reading fluency. Four primary students were selected based upon teacher referral for poor reading fluency. Flashcards were used to determine accuracy of recognition of vocabulary words listed in each students' current and previous reading books. Number of words correctly identified was recorded for each child. In addition, reading rate in the form of correct words and errors per minute (CWPM and EPM) was also assessed. Reading passages for evaluating rate were chosen randomly from each student's current reading book. A single-case A-B design was used. Both sight word recognition and reading fluency was assessed one to two times weekly for each student throughout the study. After baseline data were collected, the tutoring phase began Results indicated that three of the students showed improvement in sight-word acquisition during the intervention phase, and all four showed definite improvement in fluency.

Introduction

Children are most frequently referred for special education because of concerns about their reading skills. Many children who have difficulty reading do not qualify for special services (Curtis, Zins, & Graden, 1987); therefore it is important to develop effective interventions which may easily be implemented in the regular classroom.

Recently educators have begun taking a closer look at peer tutoring as a cost- and time-efficient method of individualizing a child's education. For example, peer tutoring has been used to improve children's word recognition (Chiang, Thorpe, & Darch, 1980), spelling (Delquadri, Greenwood, Stretton, & Hall, 1983), math (Sharpley, Irvine, & Sharpley, 1983), and written capitalization (Campbell, Brady, & Linehan, 1991).

Some teachers may be reluctant to use peer-influenced learning methods because the teacher's role in peer-assisted learning is no longer that of the chief source of information and instruction (Aronson & Goode, 1980; Moskowitz, Malvin, Schaeffer, & Schaps, 1983). It is important, then, to demonstrate the efficacy of such programs so that these teachers may be willing to try them.

The purpose of the study was to assess the effectiveness of a peer tutoring intervention for sight-word recognition. Specifically, the study assessed the recognition of vocabulary words throughout the intervention period and determined whether the progress generalized to an improvement in reading fluency.

Method

Participants

The students targeted were four second-graders. Two had been identified as having a learning disability in reading, and one had been identified as mildly mentally disabled. Participation was voluntary, with parent permission. Tutors were four fourth-grade girls, who were selected by teacher recommendation. The teacher was asked to suggest students who were altruistic and responsible, as well as being proficient readers.

Materials

Ten oral reading samples were randomly selected from the textbook which was used in classroom instruction. Each sample contained from 60 to 90 words, and selection was evenly distributed throughout the textbook.

A recording form in which the tutor logged the number of words mastered during each session also was kept inside the tutee's tutoring folder. A reinforcement chart with 12 spaces was provided. A selection of reward items were provided, based upon a poll of student preferences.

A work mat (a paper mat with spaces marked for organizing the different sets of flashcards) also was provided for the use of the tutor. This folder had pockets for storing the different groups of cards.

Flashcards were prepared of all the vocabulary words in the reading series texts, up to and including the text which would be used in the classroom (a total of 257 words). Each child had two sets of flashcards: one set for probe purposes, the second for tutoring.

Dependent Measures

There were three dependent measures: (a) correct reading rate, measured as correct words per minute (CWPM) on oral reading probes; (b) incorrect reading rate, measured as errors per minute (EPM) on oral reading probes; and (c) number of words in isolation (flashcards) correctly identified.

Procedures

Probes. An initial probe of vocabulary words was administered to determine which vocabulary words were already learned. Each word was presented and the student was allowed three seconds in which to say the word. No feedback was given during this or subsequent word probes. Incorrect words were placed in one pile, correct ones in another. After all the words had been presented, those which had been correctly identified were re-presented in an attempt to control for guessing. If the child identified the word correctly both times, it was assumed that the word had been learned. The number of words was recorded. During subsequent probes, words already learned were not re-presented; additional words learned were simply added to a running total.

Oral reading fluency probes were also administered at this time. The child was given a randomly selected passage from the reading probes and asked to read. At the end of one minute, correct reading rate as well as error rate were computed and recorded. Both word probes and fluency probes were administered one to two times per week throughout the study.

Preparation of flashcards. The cards used in tutoring were prepared using information obtained in the initial word probe. Those which were recognized in the initial probe were marked on the back with a green dot; those which were not recognized were marked with a red dot. The first ten cards to be drilled were prepared for each tutee, using a proportionate mixture of 30% unlearned to 70% learned, as recommended for optimum success in previous studies (Dickinson & Butt, 1989; Gickling & Armstrong, 1978). These ten cards were called the drill set.

Tutor training. Tutors were trained by the experimenter during one hour-long session. All tutors were trained at this time. Modeling and role-playing were the primary methods of instruction. Tutors were assessed individually by the experimenter for readiness at the end of the session, and were considered ready to begin tutoring when, during role-play with other tutors, they correctly performed 100% of the tasks on a procedural reliability checklist. In addition, the experimenter closely supervised the first tutoring session, giving prompts and coaching to the tutors when necessary.

Design. A single-case A-B design was used to assess the effects of the intervention upon word recognition and reading fluency. Data were recorded across sessions, that is, days in which school was held. It became necessary to record in this way because of an unprecedented number of snow days (16) which randomly interrupted normal school attendance.

Baseline. During this phase, no tutoring occurred. On the first day of the study, the teacher introduced the new reading book and the first story. Word probes and oral reading fluency probes were administered one to two times weekly throughout this phase, which lasted 27 days.

Tutoring. The tutoring procedure was adapted from that developed for sight words by Murphy and Fasko (1990), and Fasko (1994), using recommendations for flashcard drill developed by Van Houten and Rolider (1989). Throughout the tutoring phase, word probes and oral reading fluency

probes continued to be given one or two times weekly. Each tutoring session lasted about 15 minutes each day, and occurred in the reading teacher's classroom.

Tutors began by opening out the work mat and the flash cards. The previously learned cards had a green dot; the unlearned cards had a red dot. These decks were called the red and green decks, and they were stored in the corresponding pockets on the work mat. The tutor took the previously prepared drill set of ten cards. The drill cards were shown one by one to the tutee, who had three seconds to respond correctly by reading the word.

If the response given was correct, the tutor confirmed this by saying "That's right!" or "Good!," placed the card in the area marked "Correct," and went on to the next card. If an incorrect or no response was given, the tutor said "No," in a firm voice, stated the correct word, and had the tutee repeat it. The tutee confirmed it if correct. The card was then marked on the back with an X and placed behind the next card in the drill deck, and the tutor then went on to the next card.

After all 10 cards were shown (and any repeats), the tutor marked an O on the back of those cards that were identified correctly within the time limit. The cards were shuffled and the procedure was repeated with the same ten cards. At the end of the session, a line was drawn under the X's and O's to separate each day's marks. When a card had at least five O's in a row on the back *and* going across two days, it was considered mastered. The card was then placed on the spot marked "mastered" and replaced with a new card from either the red or the green deck, depending on the type of card mastered, thus retaining the ratio of learned to unlearned words.

At the end of each session, which lasted about 15 minutes, the number of mastered cards were counted and recorded by the tutor on the recording form, and the tutee recorded the corresponding number of marks on the reinforcement chart. When the 12 spaces of the reinforcement chart were completed, the tutee was allowed to select a reward from the reward box, and a new reinforcement chart was started. At the end of each session, each group of cards (the new deck, the drill deck, and the mastered deck) were put away in the appropriate pocket in the tutee's folder.

Results and Discussion

Data from probes were collected by the experimenter and recorded on graphs. Procedural reliability was assessed by the experimenter at 20% of the sessions for each dyad through direct observation, using a checklist designed for this purpose. Reliability for the 16 observations averaged 98%, ranging from 91% (when tutors failed to mark the cards properly) to 100%.

To assess interscorer agreement, a special education teacher familiar with the procedures tallied agreements and disagreements with the experimenter during 20% of the probe sessions. It was calculated by dividing the number of agreements per word by the number of agreements plus disagreements and multiplying by 100. Interobserver agreement for word recognition ranged from 98 to 100%, with a mean agreement score of 99%. Interobserver agreement for fluency ranged from 98 to 100%, with a mean of 99%. Disagreements primarily occurred regarding one student, who had a speech impediment which made her difficult to understand at times.

Cumulative words acquired and fluency rates are shown in Figures 1 through 4. The results indicate a definite improvement in acquisition of sight-words after initiation of the intervention for three of the four students. All four showed improvement in fluency.

Student 1 showed a definite improvement in slope in acquisition of sight-words after initiation of the intervention. Her correct reading rate rose to a higher level, and her error rate dropped noticeably.

On his sight-word acquisition, Student 2 showed a distinct upward turn in slope after tutoring began. His correct reading rate rose in level, and his error rate fell.

For Student 3, the intervention appeared to have little effect on sight-word acquisition. However, his correct reading rate improved in level quite significantly, and his error rate also fell. It should be noted that this student's mother had died during the previous spring, and he was receiving counseling for depression.

Student 4 showed a sharp upward rise in slope for sight-word acquisition after tutoring began. Her error rate remained essentially the same. Her correct reading rate, always quite

variable, improved somewhat, but remained highly variable. Student 4's performance may have been affected by several significant factors, however. During the baseline period, she was often absent, and was eventually placed in foster care shortly before tutoring was initiated.

All of the students appeared to have a lot of variability in their correct reading rates after onset of the intervention. It may be that, as time went on, there was increasingly greater likelihood that the oral reading probe randomly selected each time was from a story they had already read in class. Hence, they had already "practiced" it. Of the five points collected during the intervention phase, only that on day 48 was from a story not previously read in class. In addition, since the sight-words were taught to them in a random order, they may or may not have been taught the particular words in any one reading passage.

In summary, the results of this study offer some promising preliminary information about the effectiveness of peer tutoring flashcard drill for improving sight-word acquisition. It appears that oral reading fluency may also be strengthened by improving word recognition. The study may be improved upon by systematically measuring fluency using the next unlearned story in the textbook, rather than by random selection. In addition, the addition of a maintenance phase would also greatly strengthen the confidence in the results. Lastly, because of the small number of participants, replication is necessary to establish external validity.

References

Aronson, E., & Goode, E. (1980). Training teachers to implement jigsaw learning: A manual for teachers. In S. Sharan, P. Hare, C.D. Webb, & R. Hertz-Lazarowitz (Eds), Cooperation in education (p. 47-81). Provo, UT: Brigham Young University Press.

Campbell, B.J.,Brady, M.P., & Linehan, S. (1991). Effects of peer-mediated instruction on the acquisition and generalization of written capitalization skills. Journal of Learning Disabilities, 24, 6-14.

Chiang, B., Thorpe, H.W., & Darch, C.B. (1980). Effects of cross-age tutoring on word-recognition performance of learning disabled students. Learning Disability Quarterly, 3, 11-19.

Curtis, M., Zins, J., & Graden, J. (1987). Prereferral intervention programs; Enhancing student performance in regular education settings. In C. Maher & J. Zins (Eds.), Psychoeducational interventions in the schools: Methods and procedures for enhancing student competence (pp. 7-25). Elmsford, NY: Pergamon.

Delquadri, J.C., Greenwood, C.R., Stretton, K., & Hall, R.V. (1983). The peer tutoring spelling game: A classroom procedure for increasing opportunity to respond and spelling performance. Education & Treatment of Children, 6, 225-239.

Dickinson, D.J., & Butt, J.A., (1989). The effects of success and failure on the on-task behavior of high achieving students. Education and Treatment of Children, 12, 243-253.

Fasko, S.N. (1994). The effects of a peer tutoring program on math fact recall and generalization. Paper presented at the American Psychological Association Annual Convention, Los Angeles, CA, August, 1994.

Gickling, E., & Armstrong, D. (1978). Levels of instructional difficulty as related to on-task behavior, task completion and comprehension. Journal of Learning Disabilities, 11(9), 32-39.

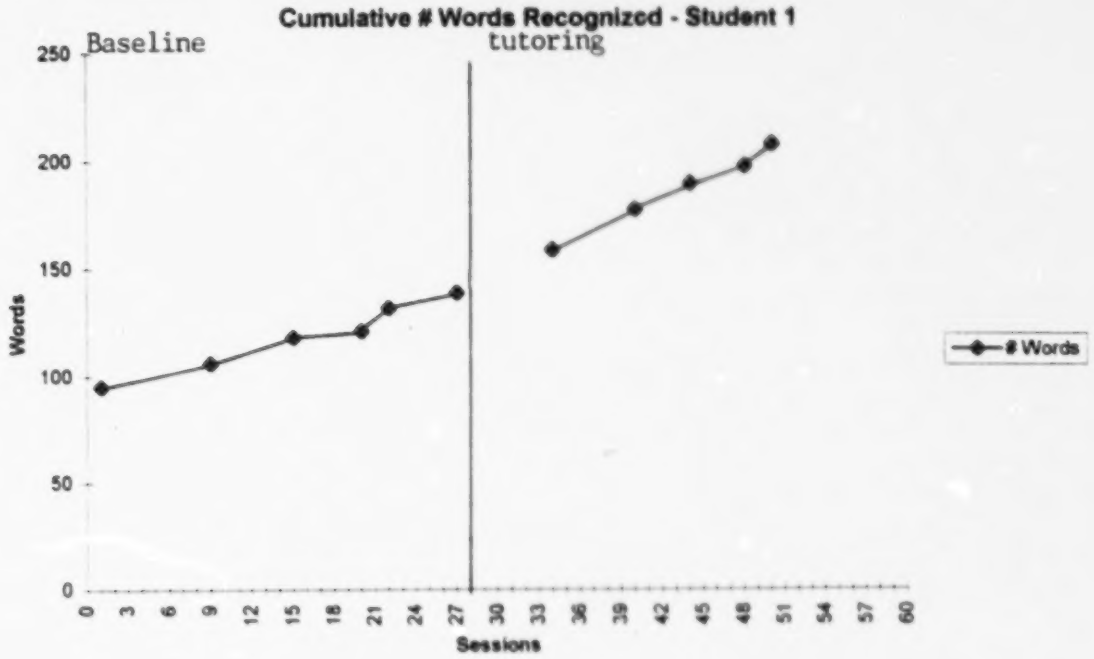
Moskowitz, J., Malvin, J., Schaeffer, G., & Schapps, E. (1983). Evaluation of a cooperative learning strategy. American Educational Research Journal, 20, 687-696.

Murphy, J.J., & Fasko, S.N. (1990, October). Effects of a cross-age peer tutoring program on second-graders' sight word acquisition. Paper presented at the annual meeting of the

Kentucky Association for Psychology in the Schools, Louisville, KY.

Sharpley, A.M., Irvine, J.W., & Sharpley, C.F. (1983). An examination of the effectiveness of a cross-age tutoring program in mathematics for elementary school children. American Educational Research Journal, 20, 103-11.

Van Houten, R., & Rolider, A. (1989). An analysis of several variables influencing the efficacy of flash card instruction. Journal of Applied Behavior Analysis, 22, 111-118.



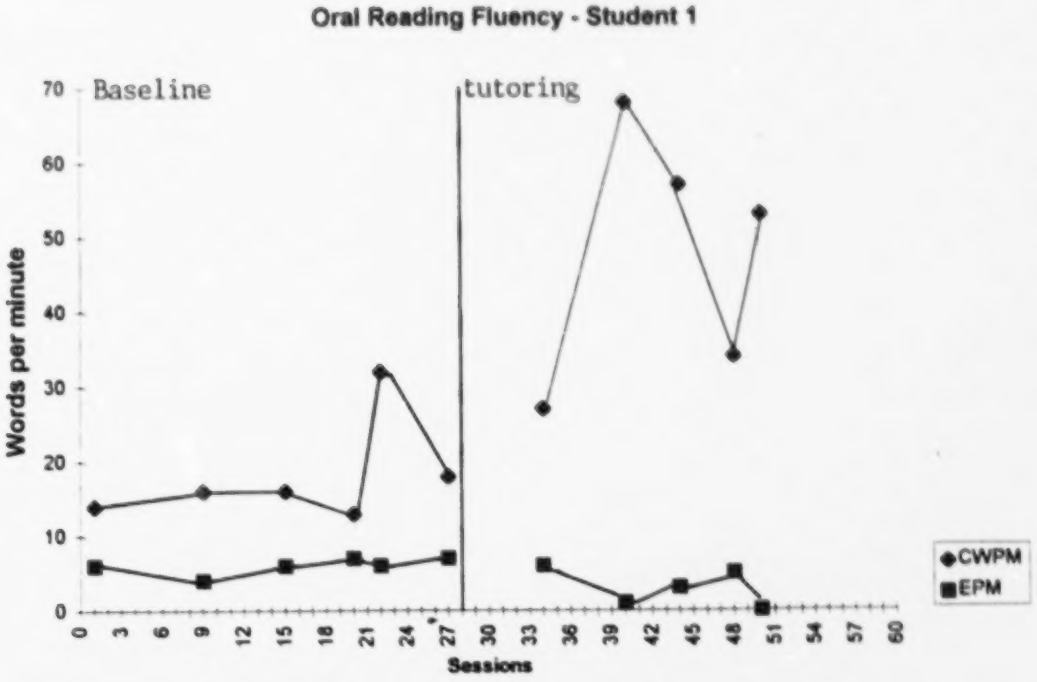
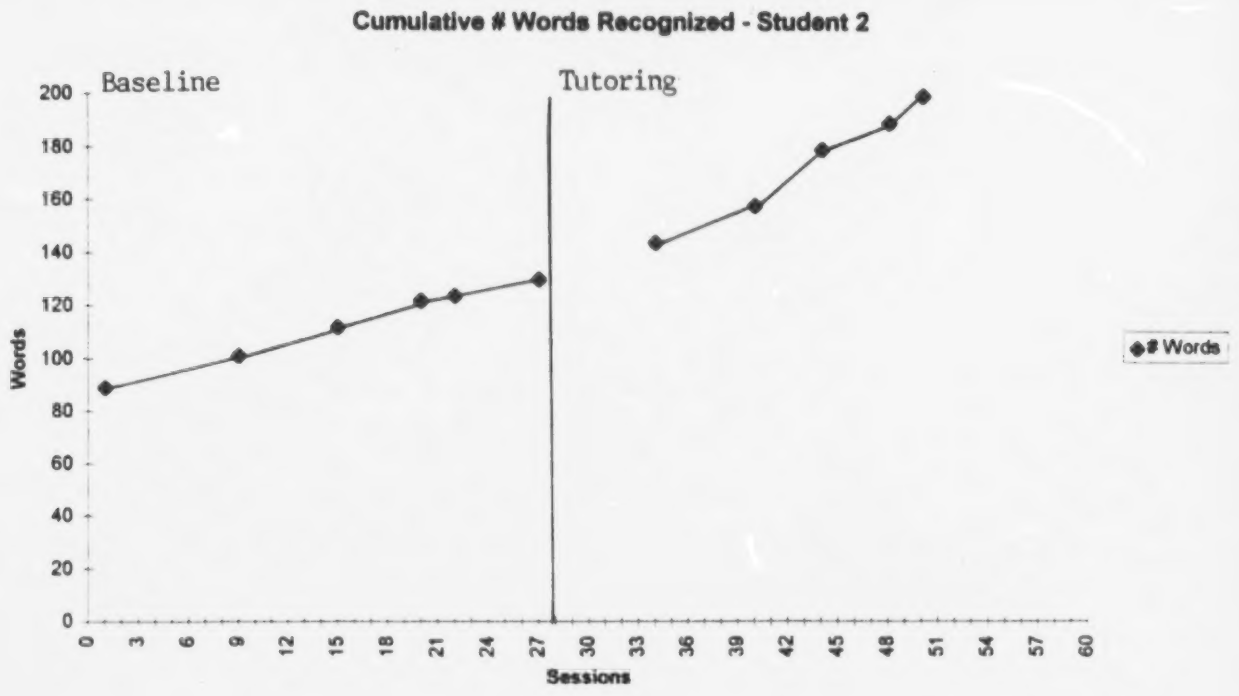


Figure 1. Cumulative # of words acquired and oral reading fluency for Student 1.



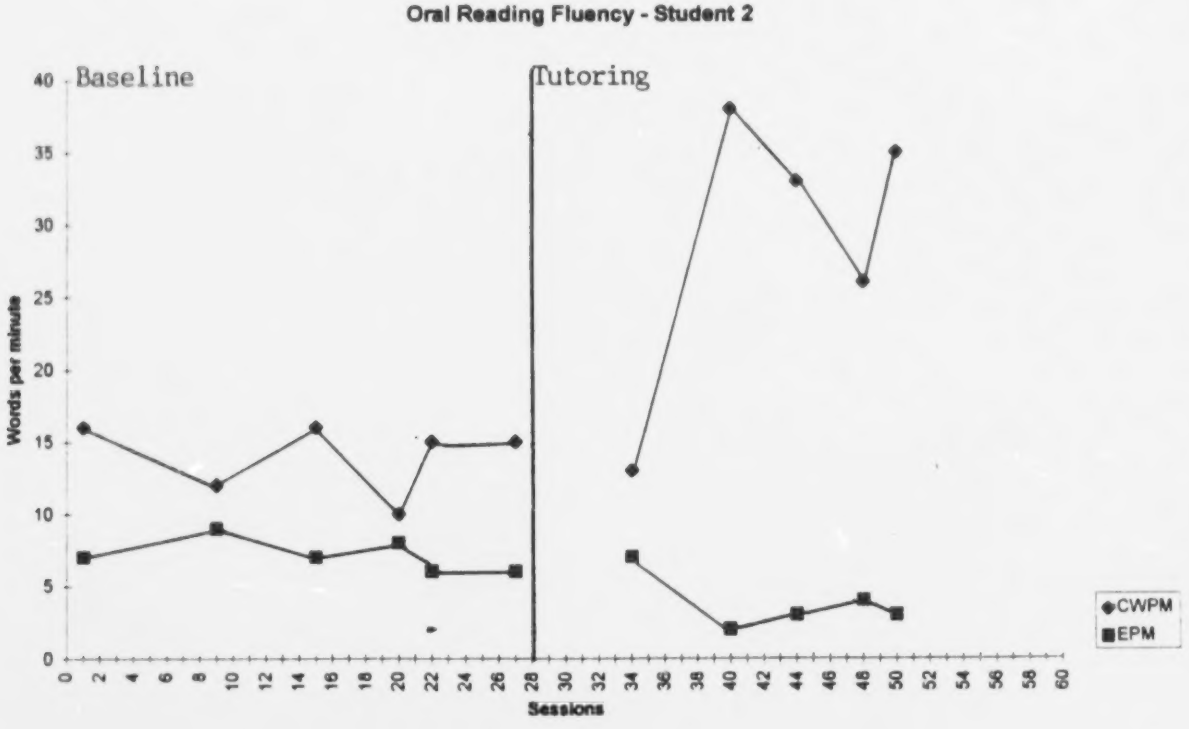
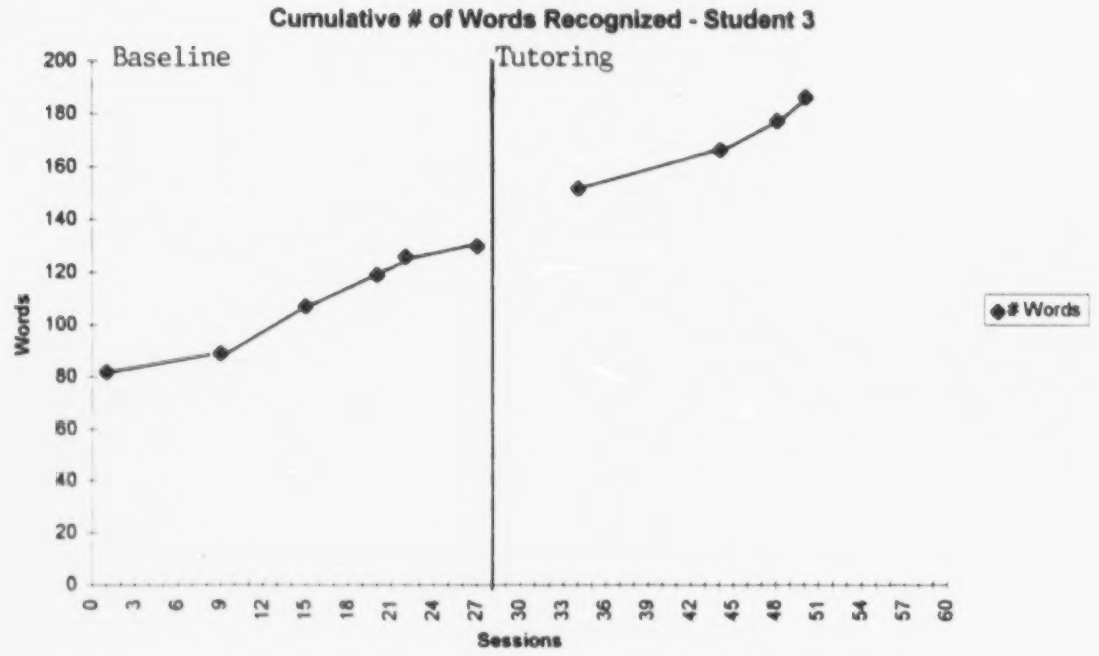


Figure 2. Cumulative # of words acquired and oral reading fluency for Student 2.



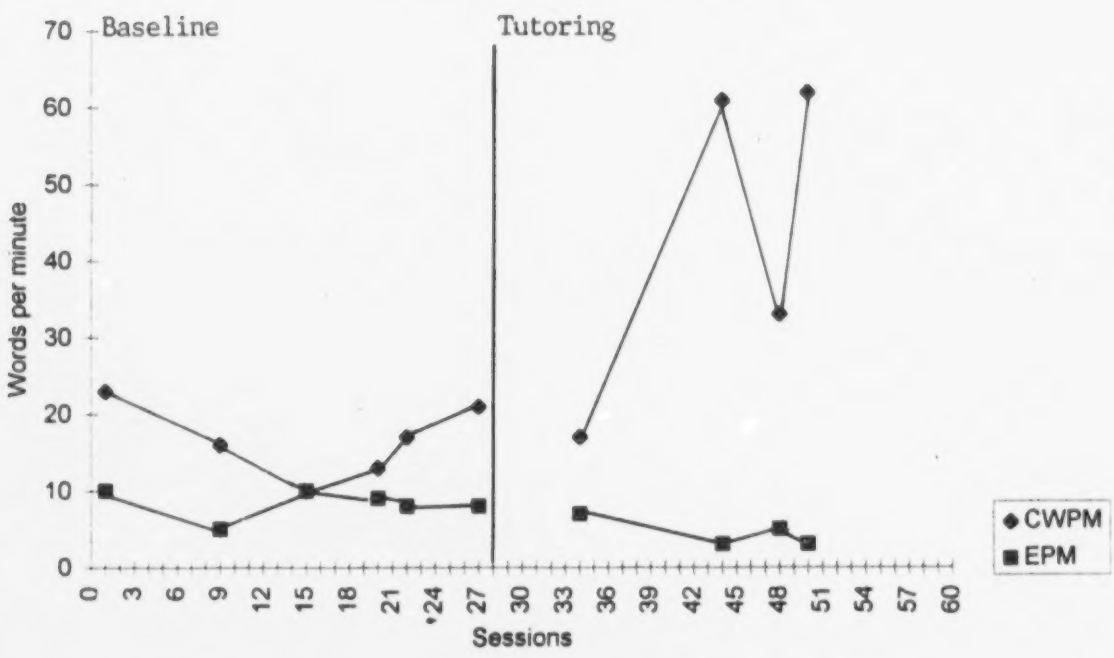


Figure 3. Cumulative # of words acquired and oral reading fluency for Student 3.

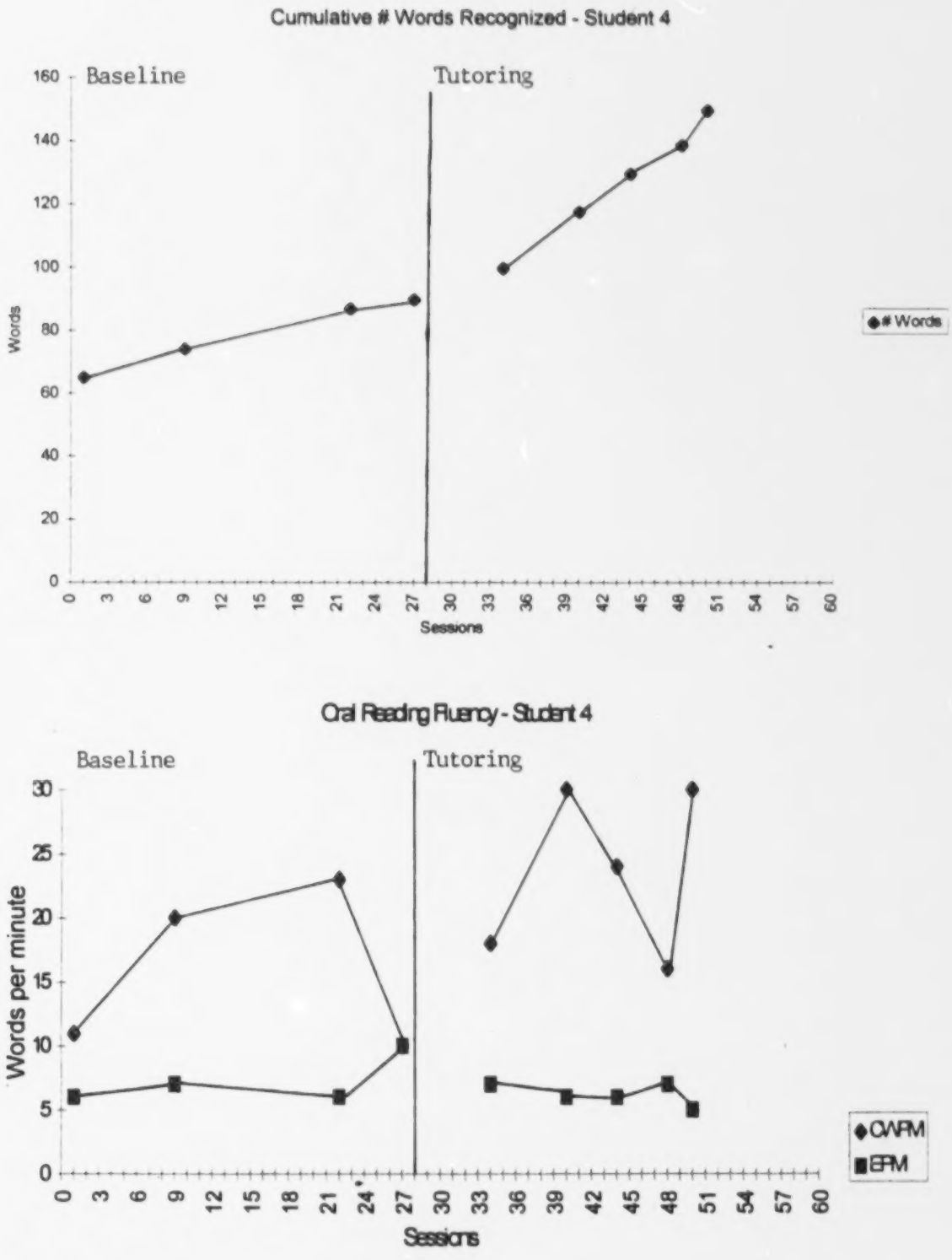


Figure 4. Cumulative # of words acquired and oral reading fluency for Student 4.